COGENT
DATA SOLUTIONS

Master Data Management

Changing the Face of Business Decision-Making

Whitepaper

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UNDERSTANDING MASTER DATA MANAGEMENT

As the global business arena gets more competitive, a large number of companies are relying on smart IT solutions to keep their business operations sharper. As the companies grow more competitive, the focus on data management is continuously increasing in order to improve business processes and decision-making. However, business data can be categorized into different levels of importance, and hence requires a more streamlined management system that focuses on the most important aspects of data.

Master Data Management is a comprehensive system of tools, procedures, infrastructure and policies that creates a synchronized data flow across all business processes and applications.

Master Data Management is a comprehensive system of tools, procedures, infrastructure and policies that creates a synchronized data flow across all business processes and applications. It helps companies create a timely, accurate and consistent record system that manages the most crucial business data elements. The management aspects include creation, storage, maintenance, exchange and synchronization of this data across different business areas.

However, before this system can be fully understood, it is first important to determine what the different types of data in an organization are, and what data elements make up the Master Data.

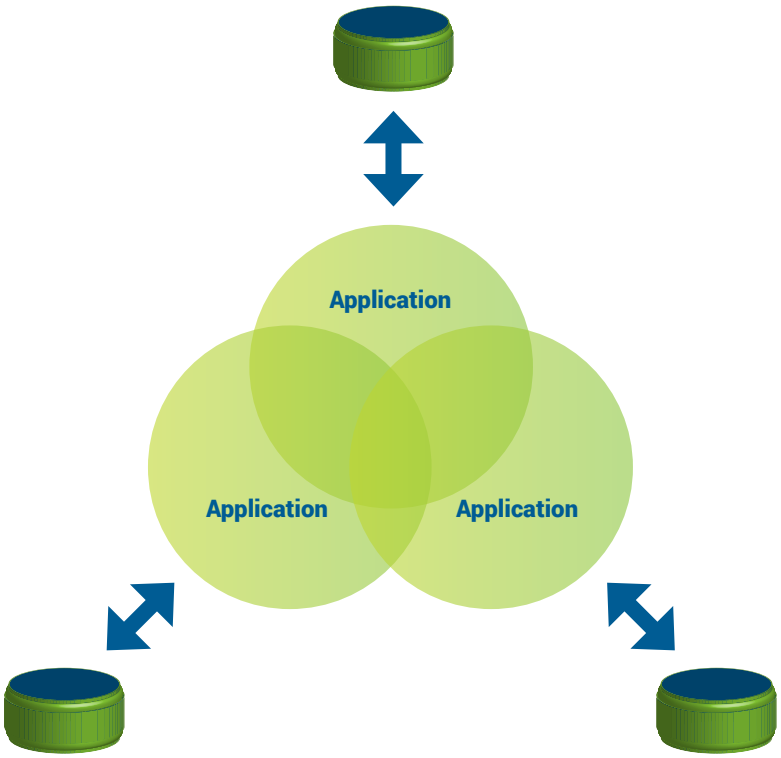

Figure 1: Fragmented Application Data

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Types of Data

All formal business data is broadly categorized into four different types. However, all these data types are inter-related, and make a contribution towards the different elements of the Master Data. Here are these types explained:

- **Transactional Data** Transactional data is generated as a result of the daily business activities that are crucial to business operations. This type of data record single events and is different for every transaction. Transactional data always involves different entities of master data, and is usually used for reporting and decision-making.

- **Reference Data** Reference data is usually used by organizations to categorize its entire database itself. This data reporting system comprises of business elements such as product group, competitor pricing and company policies where all the relevant data figures are sorted. This database system can be compared to the master data for reconciliation purposes.

- **Meta Data** Meta data is used by businesses to describe their other main data in a concise yet clear manner. It often explains the information architecture in the company, or informs when a particular data record was created or updated. Usually, Meta data creation is an automated procedure where the system itself updates Meta data when changes are made in the record database.

- **Master Data** Master data is based on the key business entities that remain unchanged. These entities include customers, suppliers, employees, products, regions and other similar information stored for long-term use. Every transaction relates to several different entities of master data. These type of data records are synchronized and used by the entire organization for different purposes.

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Defining Master Data

Master data is a set of core business data elements recorded along with their associated dimensions, attributes, properties and hierarchies. These core elements of a business include product, customer, vendor, employee, geographic location, market channels, chart of accounts and legal entities. Master Data is created, integrated and shared across all IT systems of an enterprise, ensuring data consistency for improved decision-making. A company having issues with data inconsistency usually lacks a proper Master Data Management system, a factor that can drive it out of the competitive business arena.

Master data is a set of core business data elements recorded along with their associated dimensions, attributes, properties and hierarchies.

Unless a company understands and distinguishes between its different data types, creating a consistent MDM system won't be possible. The most vital step to initiate this system is to first understand what the master data elements of a business are. An MDM system can bring companies a major advantage over their competitors, providing them access to accurate core data facts that can be used to make decisions involving the future operations of a business.

THE INCREASING IMPORTANCE OF MASTER DATA MANAGEMENT IN ORGANIZATIONAL SUCCESS

Within the business arena, Master Data Management is emerging as the buzzword today as a large number of enterprises change their IT systems to adopt this technology. A properly implemented MDM system can bring increased operational efficiency to business processes. It streamlines the data from multiple enterprise systems into a single flow and provides much better control over data management through implementing data ownership procedures.

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The Changing Business Trends

The business focus today is shifting from a process-centric system to a data-centric one, where data elements are used to drive business. This shift is not just prompted by the fierce competition but a number of other macroeconomic trends as well. This has made an MDM system one of the top priority of top level business managers. The implementation of such a system becomes even more important for companies that have gone through a merger or acquisition since its data sources are entirely inconsistent. For medium and large progressive organizations, an MDM system has become a survival system in the competitive market.

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The need for improved decision-making is one of the biggest reasons MDM system is much appreciated. Even with the most advanced Business Intelligence systems set in place for churning out automated decisions, the need for clear and consistent data in the backend data warehouse persists. It is an MDM system that brings this cleanliness and consistency in the data warehouse of an enterprise, ensuring decisions are based on accurate data facts.

Stricter regulatory norms and a need for enhanced transparency in business operations are more reasons why MDM systems are needed. With its data ownership and stewardship tools, an MDM system tracks the responsibility of inconsistent data precisely. This allows enterprises to stay at par with the regulatory norms regarding data transparency in a completely systematic way.

The shift in customer behavior is another factor that emphasizes the importance of MDM systems. Due to increased global competition, individual business customers are demanding more personal attention with highly customized customer service solutions. This requires companies to have a more consistent record of their key master element; customers. Irrespective of the service line they have been served under. Businesses now focus on holistic customer data to prioritize personal attention levels.

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Data-Driven Business Operations

There are several factors that create a distinction between successful and failing businesses such as strong management, quality products and services, and the use of effective strategies. Among these many characteristics of successful companies, three noticeable characteristics are:

- Their flexibility to adapt to and manage change
- Their ability to make better decisions and forecasts about future business operations
- Their ability to achieve compliance with legal and governmental mandates

But how do businesses attain these characteristics of achievers? These qualities are brought to a business by having in place a Business Performance Management (BPM) system that is facilitated by a strong information system. Timely access to accurate information leads to better performance of decision-makers, hence creating a need for an MDM system. Being the base factor on which a BPM system is based, an MDM system becomes a major driving factor for business operations.

Effective MDM establishes a system that gives business units complete autonomy over business information they require, irrespective of the source of information.

Effective MDM establishes a system that gives business units complete autonomy over business information they require, irrespective of the source of information. The ultimate control of this information management system lies with the IT professionals. This allows companies to keep track of noticeable changes made to the master data components, allowing them to review performance after the implementation of particular changes. By creating a well-aligned system of information that can be cross-referenced across all business entities, MDM drives decision-makers to make better operational decisions.

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Master Data – An Important Business Asset

Assets of an organization include anything that creates measurable value for the business and helps the organization achieve its objectives by assisting day-to-day business operations. Usually, the term assets is associated with the tangible possessions under a business' name, and the asset management functions of a business in the past have solely been focused on these tangibles like cash, inventory and equipment. Business data, on the other hand, is an intangible object, but it cannot be treated as anything less than as asset. It fulfills all the requirements of being a business asset, and certainly needs to be treated that way.

The Master Data Management system facilitates this shift, turning master data into a business asset instead of treating it as a business process driver.

In the dynamic business environment today, where new technologies and techniques are introduced every day, it is the crucial business data that remains constant within an organization. By shifting the business focus from processes to data, and treating it as an important asset, companies can focus on building a strategic lifecycle system for their data that can drive maximum value. The Master Data Management system facilitates this shift, turning master data into a business asset instead of treating it as a business process driver.

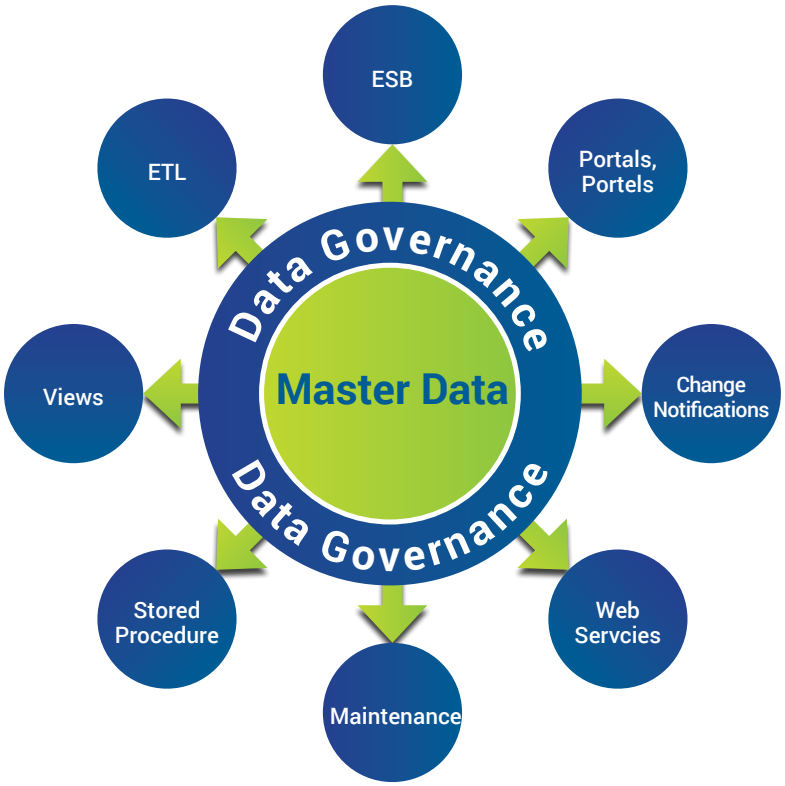

Figure 2: Data as an Asset

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INITIATING THE MDM PROCESS

Master Data Management system is not a fixed destination that an organization can achieve and then leave behind to move to better things. The system is an ongoing process, often highly complex as well, that helps the company in achieving its business goals. Once an MDM system is implemented in an organization, it becomes a core element of their operations that help them gain effectiveness and efficiency. While changes to the MDM system might be made over time, the system itself doesn't come to an end.

In order to initiate and sustain an MDM system within an organization, companies need to identify and use some prominent process drivers. These drivers are essential when it comes to keeping a track on the system progress, and the organization's ability to understand master data significance. Without these drivers, it can be impossible to organizations to see whether or not the system is being implemented in the correct manner. Let's understand what the MDM process drivers are:

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- Identifying Opportunities For Improvement Of Processes
- Analyzing Bottlenecks In The Data Flow System
- Shifting Business Focus To Processes
- Understanding The Flow Of Master Data In The Organization Holistically
- Creating An Integration Between IT And Business Entities

In order to make their Master Data Management system effective, companies should have a clear understanding of what these drivers are, and how they work.

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Identifying Opportunities for Improvement of Processes

The MDM journey can only be initiated when the organization first determines processes where improvement potential is available due to the lack or insufficiency of appropriate information. For this, certain performance levers need to be established that represent improvement goals and opportunities related to particular processes. Performance lever can be anything such as "improving customer communication efficiency" or "bringing down waiting time for customers".

In order for these improvement levers to work, the company first needs to create a standard definition for master data elements in these levers, such as "customers". An enterprise-based MDM system can only work when master data elements have a standardized definition across all business interactions. Once the core element is defined, the performance indicators related to them can also be measured accurately across the organization such as customer profitability and retention rate.

An enterprise-based MDM system can only work when master data elements have a standardized definition across all business interactions.

A standard definition of data elements can make data reconciliation across departments a more efficient process. The accurately reconciled data about each master data element makes processes and decision-making less time-consuming and highly productive, helping businesses make forecasts and formulate customer-centric business strategies. The performance levers determined by organizations provide a dimension to the data collecting efforts, specifying leading practices that are most relevant to a particular lever. When only the relevant and most accurate information is used to establish performance levers, they are more realistic.

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Analyzing Bottlenecks in the Data Flow System

Data bottlenecks or data pain points are points where it is easy to figure out data discrepancies, but identifying the actual problem is difficult. Consider a company performing similar analysis on one of its business units and coming up with different numbers. The problem with reporting clearly indicates that the inconsistency in data is why the discrepancy is appearing, but it doesn't indicate the factors causing these inconsistencies. These unidentifiable problems are the bottlenecks in the MDM system.

In order to make an MDM system work, identifying these pain points is extremely important.

In order to make an MDM system work, identifying these pain points is extremely important. Unless these pain points are identified and addressed, initiating a streamlined data management system is not practical since the data discrepancies will still persist. Identification of these data pain points requires companies to take a closer look at their base policies and definitions. Most of the time, these pain points are created due to an inconsistent definition or hierarchical structure of master data elements across organizational entities.

Once the data pain points are identified, companies can determine the effect they have on organizational performance. Considering the above mentioned situation, the data inconsistency will lead to long hours allocated to data reconciliation efforts in order to come up with a single version of truth about business data. This will impact business processes by creating a time lag in the availability of information and insight, and decrease in productivity.

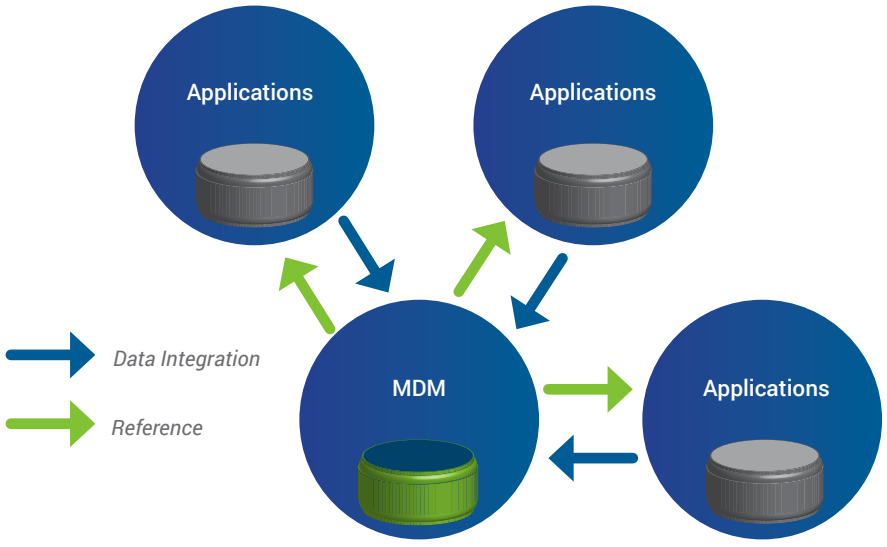

Figure 3: System of Reference

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Shifting Focus to Processes Instead of IT

An MDM system is usually taken as an entirely IT-driven function that uses technological tools for its implementation. However, before the use of any technology, this system requires a focus on business processes in order to be implemented to realize optimal value. Therefore, implementing an MDM system requires going through the procedure of reengineering business processes and performing a value assessment for each part, indicating the effect pain points would have on the different process aspects. A complete flowchart should be used to define process decomposition, which can then be used to create appropriate MDM software system for an organization.

Understanding the Flow of Master Data in the Organization Holistically

After the business processes are reengineered completely, companies can strive to understand, and map out the flow of master data through the entire organization holistically. This can help them identify points where master data needs to be synchronized to create an undisputed database. For this, key master data elements in each process level should be identified and mapped out chronologically. A single process may use one or more master data elements, and all of them need to be mapped put separately.

To create a successful MDM system, it is important that each master data element used by every process is carefully identified and standardized to a given definition of that element. Only a standardized element will give perfect data reconciliation, hence affecting the synchronization performance of data. In the end of all these MDM initiating processes, the company will have a clear and concise picture of master data flow within an organization that can be standardized across the organization and is free of data pain points.

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Creating an Integration between IT and Business Entities

The last key driver in the MDM initiating process is often the biggest challenge in driving value from this system. Most organizations make the mistake of treating the MDM process as an entirely IT driven effort, leaving its establishment and implementation to the professionals. However, an effective MDM system can only be created if a partnership is established between the IT and business departments. As the entire MDM process is deeply rooted within business processes, achieving performance goals of this system can only be made possible with the integration of the right people, processes and technologies.

The business department knows best how business is done in an organization and exactly what information is required by different entities to make decisions.

The business department knows best how business is done in an organization and exactly what information is required by different entities to make decisions. The IT department has the capability to formulate a system that can manage data in a synchronized way. Combined together, their knowledge and expertise can create a Master Data Management system that is well-integrated, mature and one drives value for the organization. However, this driver can turn out to be the toughest one to achieve since departmental collaboration over something this critical requires a lot of effort.

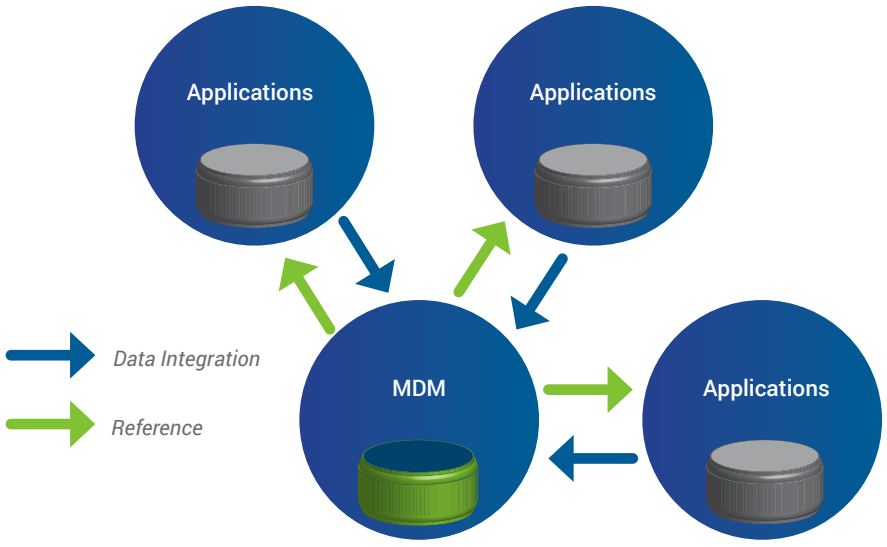

Figure 4: System of Record

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Understand the Challenges

Before initiating the MDM process, companies should be aware of the challenges they'll have to face during its establishment and implementation. While companies usually have their sights fixed to the technical challenges associated with the process, human and environmental challenges are often harder to deal with, and act as the toughest barriers in the effective implementation of this system.

The establishment of a partnership between the IT and business departments turns out to be the toughest hurdle. A successful MDM system cannot be created unless both these enterprise entities work together in a collective effort to come up with data management solutions that are free of data bottlenecks. However, an important factor that is often not considered by companies is the human factor involved in this process. While the collaboration sounds easy on paper, it can turn out in an entirely different manner in the real environment.

Change management turns out to be another major challenge that is faced by companies when implementing the MDM system.

Change management turns out to be another major challenge that is faced by companies when implementing the MDM system. The way business is done within a company keeps changing constantly, bringing a subsequent change in the reporting structures and master data of the company. For companies to keep a realistic data system, it is important to recognize these master data changes and integrate them in the MDM system in a timely manner. The synchronization points of the MDM system then need to be managed accordingly.

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CONCLUSION

Data is a crucial business asset for an organization that facilitates its daily operations. In the past, business processes were given most importance while data was considered to be an assisting tool. However, with market competition increasing significantly, the importance of business data in making more customer-centric decisions is realized by a large number of businesses. The need for having timely, accurate and consistent organizational data available for decision-making has made the implementation of Master Data Management system a top priority among businesses.

Implementation of MDM is a complex procedure that requires a company-wide collaborated initiative. The MDM system brings the master data of a company into a consistent structure, allowing business managers to make use of a single version of synchronized data when it comes to decision-making. This makes it easier for companies to focus on their core business elements such as products, customers, employees and regions in a more organized manner in the long-run. As the need for more personalized customer service goes up, an MDM system provides decision-makers access to relevant customer and organizational data that aids them in decision-making.

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About Cogent Data Solutions

CDS offers application, data, and business process integration solutions that allow organizations to successfully leverage their informational assets. Cogent Data Solutions integrates technologies to significantly increase the time-to-value for businesses. It populates timely, accurate, and up to date product information across the enterprise. Then this information is aggregated into a single repository where data inconsistency is eliminated. The information offers precise product information for all systems for the enterprise.

Geared for big data environments, CDS has flexible architecture that adapts easily to new IT platforms. The company has an expansive portfolio that includes data quality, master data management, data integration, business intelligence, and business process management. CDS thrives on offering scalable and predictable value-based IT solutions.

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